

**IN THE CLAIMS**

Please enter the following amendments to the claims:

Claim 1. (Currently amended) A method of horizontally structured CAD/CAM manufacturing, comprising:

identifying selecting a real-world blank for machining; into an actual part;  
establishing a coordinate system;

creating a master process model comprising, including a virtual blank generated from a referenced set of geometries, said master process model lacking an associative relationship with a coordinate system, said virtual blank corresponding to said real-world blank, wherein said virtual blank is substantially independent of said coordinate system;

a manufacturing feature;

virtual machining of said at least one manufacturing feature into said virtual blank, each of said at least one manufacturing feature exhibiting a first an associative relationship with said coordinate system; and

generating deriving manufacturing instructions from said master process model to create a real-world component said actual part by machining said manufacturing feature into said the real-world blank.

Claim 2. (Currently amended) The method of Claim 1 wherein said first associative relationship is a parent/child relationship.

Claims 3 - 8. (Cancelled)

Claim 9. (Original) The method of Claim 1 further comprising creating extracts from said master process model.

Claim 10. (Currently amended) The method of Claim 9 wherein said extracts comprise replicated models of said master process model at various operations of said manufacturing instructions.

Claims 11 and 12. (Cancelled)

Claim 13. (Original) The method of Claim 9 wherein said extracts are used to generate manufacturing process sheets.

Claim 14. (Original) The method of Claim 1 wherein said virtual blank is positioned and oriented relative to said coordinate system.

Claim 15. (Currently amended) The method of Claim 14 wherein said virtual blank is generated as a three dimensional parametric solid model from a said reference set geometry.

Claim 16. (Currently amended) The method of Claim 15 1 wherein said reference set geometry is defined by dimensional characteristics of a modeled part

Claim 17. (Currently amended) The method of Claim 1 wherein establishing said coordinate system comprises one or more datum planes.

Claim 18. (Currently amended) The method of Claim 17 wherein said coordinate system datum planes comprises:

creating a first datum plane positioned and oriented relative to a reference;  
creating a second datum plane positioned and oriented relative to said reference; and  
creating a third datum plane positioned and oriented relative to said reference.

Claim 19. (Original) The method of Claim 18 wherein said first datum plane, said second datum plane, and said third datum plane are orthogonal.

Claim 20. (Original) The method of Claim 1 wherein said manufacturing instructions comprise process sheets.

Claim 21. (Original) The method of Claim 20 wherein said process sheets are linked with numerically controlled tools and a coordinate measuring machine.